

Silverleaf nightshade (*Solanum elaeagnifolium*)

Factsheet | February 2024



Photos: John Heap, PIRSA.

Silverleaf nightshade is a significant weed that forms dense infestations in crops and pastures, reducing productivity by 20 to 40%.

Description

Silverleaf nightshade is a perennial plant (lives for multiple years), is dormant in winter, but has new aerial shoots emerging from a root system from late spring through summer. Erect stems typically grow 30 to 60 cm high, are branched and covered with short, tan-coloured prickles of 2 to 5 mm, mostly on the lower stems.

Its deep system of roots and rhizomes, 2 m or more below ground, help it withstand summer and droughts, using water reserves from deep in the soil.

Leaves vary in size and shape depending on location and seasonal conditions but generally are 6 to 15 cm long and 2 to 3 cm wide, and have an outline similar to gum leaves. The leaves have wavy edges and are “fuzzy” to touch.

Plants can begin to flower in November and continue during summer. The flowers are purple to violet coloured, occasionally white, up to 3 cm in diameter, have 5 petals and bright yellow anthers in the middle.

Fruits normally form in January and then ripen and produce mature seeds about 4 to 8 weeks after fruit set. The round green berries with dark stripes grow 8 to 12 mm in diameter. They turn yellow on maturing and orange-tan as they dry. These dried berries may remain on dead stems throughout winter. Seed is viable for about 5 years in the soil.

Flowering and berry development usually occur in sequential waves throughout spring and summer, influenced by rainfall and management strategies (e.g. grazing, slashing). In South Australia it is common to have at least two major flowering events during the growing season.

Silverleaf nightshade may be confused with native species such as quena (*Solanum esuriale*) or western nightshade (*Solanum coactiliferum*), which are widespread but grow mostly in sandy soils.

Impacts

Silverleaf nightshade competes with desirable winter crops and pastures by using up water and nutrients from the soil during summer.

It forms large, connected patch colonies that are difficult to control by single herbicide treatments or one management practice alone.

Silverleaf nightshade is unpalatable to stock but they will graze on the plant and mature berries when there is little pasture feed available.

Reduced production and the high costs of controlling this weed greatly reduces the value of agricultural land once infested.

Distribution

Originating in America, silverleaf nightshade was first discovered in SA in 1914. It is now found scattered across Adelaide with widespread infestations throughout the northern suburbs, horticultural and agricultural districts.

Silverleaf nightshade can reproduce from seed, root fragments and clonal shoots from buds on lateral rhizomes of its extensive root system.

Seed is spread by contaminated fodder and machinery, floodwater, slashing and stock consuming it. Movement of sheep is the greatest spreader. New infestations from root fragments is mostly confined to paddocks where cultivation is practised.

Management

Silverleaf nightshade (*Solanum elaeagnifolium*) is a declared weed under the *Landscape South Australia Act 2019*. The sale of silverleaf nightshade or contaminated goods; and its movement on a public road are prohibited. It is the responsibility of the land owner to control these plants on their property.

We encourage control of plants where there is a risk to human health, agriculture, and biodiversity. Undertaking weed control needs to be done carefully to prevent damage to native vegetation.

Control methods

Hygiene

The best control strategy for silverleaf nightshade is prevention – vigilant monitoring for new outbreaks and immediate treatment will help stop it establishing.

If planning on moving sheep and other grazing stock from infested paddocks to clean areas, do so before the plants fruit. If stock are moved from infested areas they should be kept in a holding paddock for between 7–14 days to ensure any eaten fruit/seed have been processed. This holding area should be checked for weed seedlings later.



Old season stalks with berries and new season growth.

Make sure any purchases of fodder, stock, produce and soil are free of contaminants.

Mechanical

Slashing before berries develop can suppress the weed temporarily and help to synchronise flowering, ready for herbicide application.

Chemical

To be effective, chemical control ideally requires 2 to 3 treatments over the growing season, applied at the early stage of flowering and before berry development. Various chemicals are available. Slashing to set back plants and synchronise flowering can reduce number of chemical treatments required over a season.

For advice on chemical options please refer to *Controlling declared weeds in SA* at: www.pir.sa.gov.au/biosecurity/weeds.

More detailed information about silverleaf nightshade can be found in the 'Silverleaf nightshade Australian best practice management manual 2018' on the PIRSA website.

Contact us

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Observations of weeds can be entered into *iNaturalist*, an app which can assist with identification. <https://www.inaturalist.org/>